ABSTRACT

HPLC ANALYSIS OF DRUGS II.

Diploma thesis

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In diploma thesis the optimal condition for analytical determination of tiaprofenic acid in plasma using solid-phase microextraction (SPME) and high performance liquid chromatography (HPLC) was developed.

The final analysis was performed on RP18 analytical column. The mobile phase was composed of a mixture of methanol and phosphate buffer. The flow rate of 0.7 ml/min was used. 20 µl of sample was injected on the column. Detection was performed in UV range at 306 nm.

PDMS/DVB microextraction fiber was used for the isolation of tiaprofenic acid from the sample. At first tiaprofenic acid was isolated from the water solution. Recovery of the microextraction was 19.46 %. Thereafter, tiaprofenic acid was extracted from model plasma sample. Prior extraction, pH of plasma was adjusted on 2.8. Methanol was used for analyte desorption. Optimal time of sorption and desorption was also determined. Efficiency of the developed extraction was 9.74 %.

Quantitative determination of tiaprofenic acid from the plasma sample was performed by calibration curve and using external standard.

Key words: HPLC, SPME, tiaprofenic acid, plasma